

CHAPTER 9: REVIEW OF HABITAT RESERVE DESIGN/HABITAT RESERVE MANAGEMENT PROGRAM ALTERNATIVES

SECTION 9.1 OVERVIEW OF ALTERNATIVES ANALYSIS

9.1.1 Focus of Chapter 9

As previously reviewed, the Southern Subregion conservation planning program has formulated several sets of guidelines and planning principles intended to guide both conservation and development planning at a geographic-specific level (the sub-basin Guidelines and Principles contained in the Draft Southern Planning Guidelines and Draft Watershed Planning Principles) and at the broader landscape level (the SRP/Science Advisors Tenets of Reserve Design, SAMP Tenets and Baseline Conditions Watershed Planning Principles).

Chapter 8 has analyzed the consistency of three ‘B’ Alternatives (B-8, B-10M and B-12) with the Draft Southern Planning Guidelines and Draft Watershed Planning Principles, with a focus on the sub-basin guidelines and principles set forth in *Chapters 4* and *5*. *Chapter 8* also analyzed the consistency of the programmatic A-5 Alternative (No Take/No Streambed Alteration) with the Guidelines and Principles). With regard to the ‘B’ Alternatives, the *Chapter 8* analyses provide assessments of the consistency of these Alternatives at a geographic-specific and species/habitat-specific level of analysis regarding the extent to which each Alternative helps maintain net habitat value at a sub-basin level. The *Chapter 8* assessments serve as the building blocks for the broader scale level of analysis set forth in this *Chapter 9*.

The goal of the alternatives analyses in this Chapter is to select one or more of the ‘B’ Alternatives for consideration for inclusion in the proposed Conservation Strategy to be further assessed in: (1) *Chapter 10*; (2) for species and vegetation community coverage in *Chapter 13*; (3) for statutory consistency in *Chapter 14*; and (4) in the *Part II*, NCCP/MSAA/HCP EIR/EIS. *Chapter 9* addresses the extent to which the ‘B’ Alternatives have the capability of maintaining net habitat value on a long-term basis at the broader landscape level. Using the information and analyses presented in *Chapter 8*, *Chapter 9* assesses both the Habitat Reserve designs with reference to reserve design tenets and principles and the ability of the ‘B’ Alternatives to implement the Habitat Reserve Management Program (HRMP) elements in the manner set forth in *Chapter 7*.

9.1.2 Statutory Framework

As reviewed in *Chapter 8*, Section 10 of FESA requires an applicant for a Section 10(a)(1)(B) permit authorizing Take of listed species to prepare and submit “a conservation plan that specifies –

...

(iii) what alternative actions to such taking the applicant considered and the reasons why such alternatives are not being utilized;"

(FESA Section 10(a)(2)(A)(iii))

Although alternatives considered must include non-NCCP alternatives that would address the above Section 10 requirements (*i.e.*, a "No Take" alternative), as well as "no project" alternatives under CEQA and NEPA, any alternative must be reviewed in relation to the Project Purposes, including: (1) the regional conservation planning program established pursuant to the 4(d) Rule for the gnatcatcher and (2) the objectives identified by the Wildlife Agencies and Participating Landowners, including the County of Orange. As further reviewed in the following subsection, the Project Purposes are particularly important both because the NCCP is a voluntary program and because it is intended to embody a broader regional and subregional natural communities approach than that of a typical HCP (see *Chapters 1, 2 and 10*).

9.1.3 Conservation Goals and Analytic Framework for the Chapter 9 Alternatives Analysis

The overall subregional conservation planning goals are articulated in the following excerpts from the Draft Southern Planning Guidelines set forth in *Chapter 4*:

"The goal of the Southern NCCP/MSAA/HCP is to fashion a habitat conservation planning and implementation program that addresses coastal sage scrub and other natural habitats on an ecosystem basis at a subregional level, pursuant to the State of California NCCP coastal sage scrub program and within the framework of the 1993 Conservation Guidelines. According to the NCCP Conservation Guidelines:

... subregional NCCPs will designate a system of interconnected reserves designed to: 1) promote biodiversity; 2) provide for high likelihoods for persistence of target species in the subregion, and 3) provide for no net loss of habitat value from the present, taking into account management and enhancement. No net loss of habitat value means no net reduction in the ability of the subregion to maintain viable populations of target species over the long-term.

To achieve the above goals, the NCCP Conservation Guidelines set forth seven tenets of reserve design [*i.e.*, the NCCP Scientific Review Panel Conservation Guidelines tenets of reserve design] ...

... alternative "Habitat Reserve designs" have been formulated to achieve the goals and objectives of the state and federal ESAs. Four planning elements comprise a typical

"Conservation Strategy" and serve as vehicles for carrying out the statewide NCCP Tenets of Reserve Design at the subregional level:

- *Creation of a Permanent Subregional Habitat Reserve:* This programmatic element focuses on the creation of a subregional Habitat Reserve System capable of protecting and maintaining populations of planning species over the long term.
- *Habitat Reserve Management Program (HRMP):* As discussed in *Chapter 7*, the HRMP element provides for two kinds of management of Habitat Reserve lands. The first management approach involves the continuation of pre-existing habitat management measures on County-owned parklands within the future Habitat Reserve....The second management approach involves the implementation of an Adaptive Management Program (AMP) on privately-owned future Habitat Reserve lands...The Habitat Reserve AMP focuses on the creation of the technical and institutional capability for undertaking management actions necessary or helpful to sustain populations over the long term to respond to stressor related to development.
- *Regulatory Coverage and Provisions for Designated Covered Species:* Species intended to be protected and managed by creating the Habitat Reserve and implementing the HRMP are designated as Covered Species.
- *Implementation Agreement and Funding:* The Implementation Agreement (IA) identifies the rights and obligations of all signatory parties to the approved NCCP/MSAA/HCP and provides for funding mechanisms adequate to assure the implementation of the NCCP/MSAA/HCP.... (*Chapter 4, Section 4.3*).

As reviewed in *Chapter 6*, conservation planning for the Subregion has included both previously committed open space lands with significant habitat values and the vast majority of privately-owned lands that provide important natural communities planning opportunities. The formulation and review of the 'B' Alternatives (those Alternatives directed toward the NCCP/MSAA/HCP Purposes articulated in *Chapter 2*) is intended to provide long-term natural communities planning guidance independent of the manner in which regulatory coverage and provisions would proceed. In this way, the finally approved NCCP/MSAA/HCP will provide the basis for specific proposed impacts of species/habitats associated with broader long-term conservation goals set forth in the Subregional NCCP/MSAA/HCP.

Two of the four programmatic elements of the Subregional Conservation Strategy provide the framework for the NCCP subregional plan – a permanently protected Habitat Reserve and a long-term HRMP. Each of the 'B' Alternatives reviewed in *Chapters 6* and *8* embodies a distinctive long-term Habitat Reserve design reflecting differing and specific conservation goals. Likewise, HRMP elements have been formulated to provide both for ongoing management within already protected public and conservancy open space lands and for adaptive management

of Habitat Reserve lands intended to be protected in conjunction with the mitigation of proposed impacts on both public and private lands. *Chapter 8* has reviewed the consistency of the ‘B’ Alternatives with specific sub-basin habitat management and restoration elements of the overall HRMP that involve these two programmatic elements of the ultimate subregional Conservation Strategy. This Chapter builds on the *Chapter 8* analyses by providing a landscape level assessment of long-term habitat protection, restoration and management under the different ‘B’ Alternatives.

The remaining two elements of the Conservation Strategy – regulatory coverage and provisions for species proposed to be Covered Species and the IA – necessarily relate in significant part to commitments on the part of Participating Landowners and measures required to mitigate for impacts of proposed Covered Activities on proposed Covered Species and proposed Conserved Vegetation Communities. In turn, regulatory coverage and provisions and program implementation are based on concurrent processing of impact authorizations with the NCCP/MSAA/HCP. The review of proposed Covered Species, and proposed Conserved Vegetation Communities that provide habitat for the proposed Covered Species, is presented in *Chapter 13*. *Chapter 14* reviews the consistency of the Subregional NCCP/MSAA/HCP with applicable guidelines and principles and with statutory requirements, including required implementation measures (see discussion under *Section 9.1.5*).

9.1.4 Application of the Draft Southern Planning Guidelines and Draft Watershed Planning Principles to the Chapter 9 Review of Alternatives

Chapter 9 applies three sets of landscape conservation planning principles set forth in the Draft Southern Planning Guidelines and Draft Watershed Planning Principles:

The SRP/Science Advisors Tenets of Reserve Design: The Southern NCCP Science Advisors adopted the tenets of reserve design of the Statewide Conservation Guidelines but combined two of the guidelines (“keep reserve areas close” and “link reserves with corridors”) into one category and added a new tenet: “maintain ecosystem processes.” These seven tenets of reserve design are summarized as follows:

- **Tenet 1: Conserve target species throughout the planning area** – As reviewed previously, for purposes of Southern NCCP/MSAA/HCP planning, the term “target species” has been replaced with the term “planning species” in order to denote a broader suite of species used for Habitat Reserve design planning purposes than the narrower list of coastal sage scrub-focused species initially identified by the SRP.
- **Tenet 2: Larger Reserves are Better**
- **Tenet 3: Reserves Should be Diverse**
- **Tenet 4: Keep Reserves Contiguous**

- **Tenet 5: Maintain and Create Landscape Linkages between Reserves**
- **Tenet 6: Protect Reserves from Encroachment and Invasion of Non-native Species**
- **Tenet 7: Maintain Ecosystem Processes and Structures**

Importantly, the final report of the Southern Orange County NCCP Science Advisors states:

. . . the science advisors recognize that it may be impractical or unrealistic to expect that every design principle will be completely fulfilled throughout the subregion. They also recognize that fulfillment of some principles may conflict with others. It is for this reason that the principles have been stated as “should” in most cases, rather than as absolutes.

(Science Advisors, 1998, *Appendix B*)

In keeping with the Science Advisors’ guidance regarding the application of the Tenets of Reserve Design, each of the ‘B’ Alternatives embodies different conservation strategy priorities in order to allow a weighing of priorities and a way of assessing different means of attaining both conservation planning priorities and the balance between natural communities protection and societal needs set forth in the Legislative Findings and Section 2805(h) of the NCCP Act of 1991. The final assessment and comparison of Alternatives thus involves a conscious weighing of priorities and balancing of NCCP Act goals while still meeting the requirements of FESA, the NCCP Act and Fish and Game Code Section 1600 *et seq.* for species/habitat protection.

SAMP Tenets: As reviewed in NCCP/MSAA/HCP *Chapter 5*, the SAMP Tenets are intended to provide conservation planning guidance for watershed planning at the landscape level. The eight SAMP tenets are summarized as follows:

- SAMP Tenet 1: No Net Loss of Acreage and Functions of Waters of the U.S./State
- SAMP Tenet 2: Maintain/Restore Riparian Ecosystem Integrity
- SAMP Tenet 3: Protect Headwaters
- SAMP Tenet 4: Maintain/Protect/Restore Riparian Corridors
- SAMP Tenet 5: Maintain and/or Restore Floodplain Connection
- SAMP Tenet 6: Maintain and/or Restore Sediment Sources and Transport Equilibrium
- SAMP Tenet 7: Maintain Adequate Buffer for the Protection of Riparian Corridors
- SAMP Tenet 8: Protect Riparian Areas and Associated Habitats of Listed and Sensitive Species

In response to the above tenets, a major effort was undertaken to delineate at a project-specific level of field analysis – from both a regulatory and a functional perspective – areas considered to be “wetlands” (as well as non-wetlands waters of the U.S.) and areas considered to be “riparian habitat.” This collaborative field delineation effort (involving the Wildlife Agencies and Participating Landowners) is described and summarized in *Appendix R*. Given the site-specific nature of the delineation effort and the systematic application of criteria for defining “riparian” areas, revisions to the earlier NCCP mapping effort to reflect the more precise and time-relevant attributes of the delineation effort have been made.¹

Baseline Conditions Watershed Planning Principles: Both the SRP/Science Advisors Tenets of Reserve Design and the SAMP Tenets place considerable emphasis on maintaining fundamental landscape processes including hydrologic and sediment generation processes and fire. As reviewed in *Chapter 1*, the Southern NCCP Science Advisors added a new tenet of reserve design directed toward maintaining ecosystem process and structures:

The reserve system should protect intact hydrologic and erosional processes, including both normal function and extreme events (flooding, earthflow). Reserve design should protect to the maximum extent possible the hydrology and erosion regimes of riparian systems, especially in Cristianitos, San Juan and Trabuco drainages.

Similarly, the SAMP tenets focus heavily on landscape processes (see SAMP tenets 2, 3, 4, 5 and 6). In support of these elements of the Tenets of Reserve Design and the SAMP Tenets, as well as in recognition of the overarching significance of terrains and hydrology in shaping and influencing habitat systems, a set of Baseline Conditions Watershed Planning Principles was prepared.

The main topics and planning principles enumerated in the Baseline Conditions Watershed Planning Principles are as follows:

- **Geomorphology Terrains**

Principle 1: Recognize and Account for the Hydrologic Response of Different Terrains at the Sub-Basin and Watershed Scale.

Hydrology

Principle 2: Emulate, to the Extent Feasible, the Existing Runoff and Infiltration Patterns in Consideration of Specific Terrains, Soil Types and Ground Covers.

¹ Generally, there is a broad correlation between NCCP mapping and the recent delineation undertaking for large-scale riparian systems but considerably more differences where small tributaries were reviewed reflecting earlier difficulties with aerial photo interpretation, as contrasted with full ground-truthing, and a more rigorous functional definition of “riparian” adhered to by the delineation effort.

Principle 3: Address Potential Effects of Future Land Use Changes on Hydrology.

Principle 4: Minimize Alterations of the Timing of Peak Flows of Each Sub-Basin Relative to the Mainstem Creeks.

Principle 5: Maintain and/or Restore the Inherent Geomorphic Structure of Major Tributaries and Their Floodplains.

- **Sediment Sources, Storage and Transport**

Principle 6: Maintain Coarse Sediment Yields, Storage and Transport Processes.

- **Groundwater Hydrology**

Principle 7: Utilize Infiltration Properties of Sandy Terrains for Groundwater Recharge and to Offset Potential Increases in Surface Runoff and Adverse Effects to Water Quality.

Principle 8: Protect Existing Groundwater Recharge Areas Supporting Slope Wetlands and Riparian Zones; and Maximize Groundwater Recharge of Alluvial Aquifers to the Extent Consistent with Aquifer Capacity and Habitat Management Goals.

- **Water Quality**

Principle 9: Protect Water Quality by Using a Variety of Strategies, with Particular Emphasis on Natural Treatment Systems such as Water Quality Wetlands, Swales and Infiltration Areas and Application of Best Management Practices Within Development Areas.

In conjunction with the above analyses for each 'B' Alternative, an assessment is made of the ability of the 'B' Alternatives to implement the proposed AMP element of the HRMP. (The *Chapter 7* HRMP, as well as sub-basin restoration and management guidelines, were prepared independently of any and all of the 'B' Alternatives and, as a consequence, particular 'B' Alternatives may not be consistent with elements of the *Chapter 7* and sub-basin management and restoration prescriptions.) Finally, an overall assessment is made as to whether or not each Alternative has the ability to provide for the Habitat Reserve and HRMP elements of a Conservation Strategy within the framework of the Draft Southern Planning Guidelines and Draft Watershed Planning Principles and the Project Purposes set forth in *Chapter 2*. If any of the 'B' Alternatives is found not capable of fulfilling these elements of the Conservation Strategy, that Alternative will be recommended for elimination from further consideration in *Chapters 10, 13 and 14* for inclusion in the draft Conservation Strategy to be reviewed as the Proposed Project in the EIR/EIS for the NCCP/MSAA/HCP (all of the 'B' Alternatives receive

further review in the *Part II* EIR/EIS for the NCCP/MSAA/HCP to provide a complete assessment of all environmental considerations under CEQA and NEPA).

9.1.5 Relationship of the Analysis of the ‘B’ Alternatives to Potential Impacts on Planning Species and Vegetation Communities

As reviewed in the preceding subsection, the landscape level guidelines and principles – the SRP/Science Advisors Tenets of Reserve Design, the SAMP Tenets and the Baseline Conditions Watershed Planning Principles – will be applied in this *Chapter 9* to three ‘B’ Alternatives (building on the sub-basin consistency analyses set forth in *Chapter 8*) so that potential conservation priorities and implementation goals can clearly be identified for Habitat Reserve design, adaptive management and IA purposes. Following the completion of these analyses and a comparative weighing of the strengths and weaknesses of three ‘B’ Alternatives (including the above-discussed selection of an Alternative for further consideration and the identification of Alternatives to be deleted from further consideration), *Chapter 10* will set forth the proposed Conservation Strategy based on the selected ‘B’ Alternative. *Chapter 13* will review species and CDFG Jurisdictional Areas proposed for regulatory coverage and provisions for the ‘B’ Alternative selected for further review in relation to proposed impacts. Finally, *Chapter 14* will assess the ‘B’ Alternative selected for further review and proposed impacts for consistency with NCCP Act, MSAA and HCP statutory requirements, including applicable regulations and policies.

9.1.6 Project Purposes and Feasibility Considerations Relevant to Assessing Habitat Reserve Design Alternatives and the Habitat Reserve Management Program Consistent with Applicable Guidelines While Allowing for Compatible and Appropriate Development and Growth

a. Project Purposes

Chapter 9 addresses the Project Purposes set forth in *Chapter 2*, including both the attainment of the NCCP and SAMP goals identified in *Chapter 2* and other Purposes identified by the permit applicants, in order to determine which Alternative(s) is(are) feasible and capable of meeting both the applicable statutory standards and NCCP/MSAA/HCP program purposes. The analysis of Alternatives under the NCCP program derives in part from the following statement of Legislative Findings for the NCCP Act of 1991 (as well as the other NCCP Act Legislative Findings reviewed in *Chapter 2*):

Natural community conservation planning promotes coordination and cooperation among public agencies, landowners, and other private interests, provides a mechanism by which landowners and development proponents can effectively participate in the resource planning process, provides a regional planning focus which can effectively

address cumulative impact concerns, minimizes wildlife habitat fragmentation, promotes multi-species management and conservation, provides one option for identifying and ensuring appropriate mitigation for impacts on fish and wildlife and promotes the conservation of broad based natural communities and species diversity.

As noted previously, the NCCP is a voluntary program dependent on a collaborative process and, as a result, both the Purposes of the Participating Landowners and Jurisdictions and the resources agencies must be addressed in formulating and assessing alternatives. Thus, given the subregional conservation planning context for the NCCP/MSAA/HCP, the voluntary nature of the NCCP Program/Section 10 HCPs and legal requirements to assess alternatives with reference to Project Purposes, the feasibility of attaining the Project Purposes is a central consideration of the NCCP/MSAA/HCP Alternatives Analysis. Project Purposes are also central considerations under CEQA, NEPA, and Clean Water Act Section 404 in defining a reasonable range of Alternatives and in assessing the feasibility of Alternatives (see discussion below). As reviewed in *Section 9.1.1*, the fundamental goal of the NCCP/MSAA/HCP is to establish a subregional Habitat Reserve that can be managed over the long term while allowing reasonable development addressing societal needs. According to Fish and Game Code Section 2805(a), a [NCCP] “plan identifies and provides for the regional or area-wide protection and perpetuation of wildlife diversity, while allowing compatible and appropriate development and growth.” Although alternatives may be considered even if they would impede to some degree the attainment of the project objectives or would be more costly, the alternatives must nonetheless meet the basic goals of the conservation program (including meeting statutory requirements) and must be capable of being implemented.

b. Feasibility of Alternatives in Relation to Project Purposes

Pursuant to Section 10 of FESA, the Secretary of the Interior must find that, with respect to a “permit application, and the related conservation plan, that . . . the applicant will, *to the maximum extent practicable*, minimize and mitigate the impacts of such taking” (16 USC (a)(1)(B)(ii), emphasis added). NEPA and CEQA have similar feasibility standards built into the assessment of minimization and mitigation (*e.g.*, pursuant to CEQA Guidelines Section 15126.6, in selecting alternatives to the proposed project, the lead agency is to consider alternatives that could feasibly obtain most of the basic objectives of the project). Since one of the major purposes of an alternatives analysis is to determine whether there are feasible alternatives capable of minimizing and mitigating potentially significant adverse environmental effects, the economic, environmental and technical feasibility of potential alternatives must be assessed as part of the alternatives analysis. However, no one factor establishes a fixed limit on the scope of alternatives considered.

In the following analyses of both the No Take/No Project Alternatives and the three NCCP/MSAA/HCP ‘B’ Alternatives, each Alternative will be assessed in relation to the Project Purposes set forth in *Chapter 2*. The feasibility of implementing the Alternatives will be assessed with regard to:

- **Environmental Feasibility:** Alternative conservation strategies involve different balancing considerations with respect to species, habitat and overall Habitat Reserve design and HRMP factors. The weighing of these different factors involves determinations regarding the environmental feasibility of a particular Alternative (see further discussion in *Section 9.1.6.b*).
- **Economic Feasibility:** The ability to both assemble and manage a proposed Habitat Reserve is a central consideration in assessing Alternatives. The extent of required dedications has statutory and case law limitations generally involving a standard of “rough proportionality” between impacts and offsetting mitigation dedications that can be required. If a particular Habitat Reserve design requires land areas in excess of dedications reasonably related to development impacts, some form of acquisition would be required for such lands. To the extent that a particular Habitat Reserve design would rely in significant part on acquisitions of private lands, feasibility assessments are required relating to: (1) the availability of public or other funds for purchase; and (2) the willingness of the particular landowner to enter into a voluntary sale agreement (the policies of the state and federal wildlife agencies require a willing seller). Two of the proposed Alternatives (B-10M and B-12) provide for comparable development acreages (and associated housing units) in different locations while the other Alternative (B-8) substantially reduces development acreages. The Alternatives analysis will examine the implications of the differences in the three Alternatives for purposes of assembling the Habitat Reserve. Similarly, the amount and location of development will influence both the extent of, and need for, funding for the long-term AMP; feasibility considerations that will also be reviewed in this Chapter (see further discussion in *Section 9.1.5* below).
- **Technical Feasibility:** Geological and other site considerations may influence both the feasibility of development areas provided for under different Alternatives and the feasibility of potential minimization and mitigation measures under a particular Alternative. To the extent that these considerations are understood at the present level of planning, technical feasibility factors will be examined.

9.1.7 Programmatic Alternatives and Habitat Reserve Alternatives

Broadly speaking, alternatives considered can be divided into two groupings: (1) Programmatic Alternatives (included within the ‘A’ Alternatives developed for the Alternatives Public Workshop); and (2) Habitat Reserve Alternatives (the ‘B’ Alternatives developed for the

Alternatives Public Workshop and Alternatives subsequently developed by the Working Group and by the County of Orange as part of the GPA/ZC review process).

a. Programmatic Alternatives

The first set of alternatives, titled “Programmatic Alternatives” (*i.e.*, the ‘A’ Alternatives) comprises alternatives that would involve an approach that differs programmatically from alternatives formulated in response to the goals and objectives of the NCCP program incorporated into the 4(d) rule. Other ‘A’ Alternatives required by CEQA/NEPA that do not relate directly to FESA/CESA/NCCP statutory purposes or programs are not included here, but are reviewed in the NCCP/MSAA/HCP EIR/EIS.

Two categories of Programmatic Alternatives have been identified for consideration:

- Under a “No Project” Programmatic Alternative, the conservation approach would involve sequential smaller scale HCPs covering portions of RMV rather than the proposed NCCP/MSAA/HCP subregional plan. This approach is reviewed to determine whether applicable statutory requirements could be met under FESA and CESA for federal and state-listed species (CESA has a functional equivalent provision for species addressed under a Section 10 HCP) and the requirements set forth for streambed alteration in Fish and Game Code Section 1600 *et seq.*). By definition, this Alternative is not intended to address the broad conservation goals of the NCCP Act under the 4(d) Rule regional conservation planning program but instead only addresses habitat requirements for listed species with respect to alternatives to proposed Take. As in the case of the “No Take/No Streambed Alteration” Alternative, the “No Project” Alternative would be reviewed in relation to the Project Purposes set forth in *Chapter 2*.
- Under a “No Take/No Streambed Alteration” Programmatic Alternative, the planning area is reviewed to assess whether it is feasible to avoid Take of all habitat occupied by listed species and to avoid the alteration of streambed areas subject to CDFG jurisdiction. Open space areas resulting from the application of listed species avoidance requirements would then be reviewed to assess: (1) the likely consequences regarding long-term management and likelihood of survival and recovery of listed species, and (2) the ability of the No Take/No Streambed Alteration open space areas to further the statutory purposes of FESA and the NCCP Act of 1991, both with respect to habitat systems and to listed and unlisted species, and the provisions of Fish and Game Code Section 1600 *et seq.* This Alternative is required under FESA Section 10.

b. Habitat Reserve Design Alternatives

The 4(d) Rule for the coastal California gnatcatcher establishes a regional habitat conservation program to be undertaken in large-scale planning subregions. Inherent in the “regional planning focus” of the NCCP program is the need to consider large-scale alternatives capable of promoting “the conservation of broad based natural communities and species diversity.” At the heart of the formulation of the proposed Conservation Strategy Alternative is the need to identify a range of Habitat Reserve configurations in order to provide a resource base as the foundation for the other three elements of the NCCP Conservation Strategy – HRMP, Species Regulatory Coverage and Provisions and Implementation Agreement and Funding.

Within the Southern NCCP Subregion, there presently remain only two large scale land areas with significant resource planning opportunities: (1) the Foothill-Trabuco Specific Plan Area (approximately 3,500 acres of undeveloped land [94 percent] of 3,770 total acres in the Plan Area), and (2) RMV (22,815 acres of undeveloped land). Because the NCCP Program is a voluntary undertaking that is dependent on the enrollment and commitment of participants to the planning program, some landowners and/or local government jurisdictions may decide not to participate in the planning process at the present time. *Chapter 10*, the proposed Conservation Strategy, addresses the treatment of those landowners that are not participating in this NCCP/MSAA/HCP.

As reviewed in *Chapter 6*, RMV comprises the only large-scale undeveloped land ownership that has participated actively in the Southern NCCP/HCP planning program. Importantly, RMV lands are centrally located within the planning area and connect with major protected open space areas to the west, the north, the east and the south. In order to formulate an overall Habitat Reserve, RMV lands, by virtue of their location and their natural resources, are the centerpiece of the planning program. Consequently, the Habitat Reserve Alternatives identified by the NCCP working group and the County of Orange focus on the RMV landholdings.

Through the public review and planning participants coordination processes set forth in the NCCP Planning Agreement, several Habitat Reserve configurations have been identified that apply the NCCP/SAMP reserve design tenets in ways that embody different conservation priorities. Nine of the 12 ‘B’ Alternatives (B-1 through B-7, B-9 and B-11) were rejected for further consideration for reasons set forth in *Chapter 6*. Three of the ‘B’ Alternatives were retained for further analysis for the reasons set for in *Chapter 6*: B-8, B-10M and B-12.

In order to address the conservation policy considerations inherent in the Project Purposes set forth in *Chapter 2*, the three Habitat Reserve Alternatives reviewed in this Chapter focus on a range of conservation strategies embodying different conservation priorities (see discussion in *Chapter 6*). The three Habitat Reserve Alternatives are designed to focus on different

conservation goals and other goals of Participating Landowners, including long-term County housing and community development goals. Thus, the alternatives carried forward for further analysis in this Chapter are the B-8, B-10M, and B-12, in addition to the required “No-Project” and “No Action” alternatives.

Consistent with the Legislative Findings for the NCCP Act reviewed in *Chapter 2*, comparable community development opportunities are provided under Alternatives B-10M and B-12. This level of opportunity is intended to address, in a meaningful way, the acute housing needs identified by the County of Orange in OCP 2000 and to provide an economic basis for land dedications that could be a central element of the program for ultimately assembling the Habitat Reserve. The latter consideration is particularly important because land values in Orange County are extremely high. Given Orange County land values and the likely available level of public or non-profit funding sources, total acquisition of RMV lands almost certainly would not be feasible, even if RMV were to be a willing seller. Alternatives B-10M and B-12 provide for dedication of the entire Habitat Reserve land area on RMV lands proposed under both of these Alternatives without any need for public acquisition funding for purposes of assembling the Habitat Reserve. The B-8 Alternative, on the other hand, reflects a conservation and Habitat Reserve assembly strategy that is dependent primarily on acquisition. Thus, as reviewed previously, the economic feasibility of assembling the Habitat Reserve, along with considerations involving the attainment of other programmatic/societal goals such as housing, is a significant factor to be considered in reviewing such Habitat Reserve alternatives.

It is important to note that the scale and configuration of the Habitat Reserve ultimately selected for inclusion in the final Conservation Strategy will, in significant part, reflect the range of species selected for regulatory coverage and provisions (as well as a range of other important considerations such as feasibility of assembling the reserve, connectivity, long-term management considerations). Because the Habitat Reserve Alternatives reflect different large-scale conservation priorities and different land use goals, the degree to which these alternatives address and provide protection and management for all of the species selected as planning species may differ. Likewise, the three ‘B’ Alternatives differ in the extent to which they would allow and provide for the implementation of specific restoration and management recommendations set forth in the Draft Southern Planning Guidelines and Draft Watershed Planning Principles, as well as habitat management measures identified in *Chapter 7*.

SECTION 9.2 ANALYSIS OF PROGRAMMATIC ALTERNATIVES

Two programmatic alternatives are designated to receive continuing consideration as part of this NCCP/MSAA/HCP. These programmatic alternatives do not reflect or attempt to address either the subregion-level goals and purposes of the NCCP/MSAA/HCP or the watershed-level goals and purposes of the SAMP. One of the two alternatives addressed in this section would involve the need to obtain state and federal approvals without relying on a NCCP approach or a SAMP

and is addressed as the “No Project” Alternative (A-4). The A-4 or No Project/No SAMP Alternative has an open space configuration that is identical to the B-12 Alternative Habitat Reserve design (see *Figure 133-M* for B-12 Alternative). The second programmatic alternative is the No Take Alternative (A-5) (see *Figure 121-M*). This Alternative would avoid the need for state and federal permits for listed species (under CESA and FESA) and for jurisdictional wetlands and streams (under Fish and Game Code 1600 *et seq.* and the federal CWA).

In the following sections, the A-4 and A-5 programmatic alternatives are discussed and evaluated in terms of their:

- significant characteristics and elements;
- consistency with NCCP/MSAA/HCP purposes and goals;
- ability to formulate a NCCP Conservation Strategy;
- ability to be coordinated with other planning/regulatory processes, including the County GPA/ZC, SAMP and state Clean Water Programs; and
- ability to provide for comprehensive CEQA/NEPA program level analyses.

9.2.1 No Project/No SAMP (Alternative A-4, no figure)

The No Project/No SAMP Alternative assumes that development in RMV and the Foothill-Trabuco Specific Plan Area (FTSPA) would proceed on a case-by-case, permit-by-permit approach and that neither the Draft Southern Planning Guidelines nor the Draft Watershed Planning Principles would be applicable. Under the A-4 Alternative there would be no subregional NCCP/MSAA/HCP and no SAMP. RMV would likely proceed with a series of large-scale HCPs/Section 404 permits whose configuration would likely be influenced by infrastructure extension and market considerations. For illustrative purposes, RMV could permit on a Planning Area-by-Planning Area basis the County approved project, the B-10M as refined by the Settlement Agreement to constitute the B-12 Alternative, as a series of HCP's/Section 404 permits (see *Figure 133-M*). Development in the FTSPA would proceed in the same manner as with past development on a project-by-project, permit-by-permit basis.

Under the No Project/No SAMP Alternative, potential development areas would address overall species protection/mitigation goals comparable to other large scale development projects and recent Section 7 consultations involving listed species.

a. Significant Elements of the No Project/No SAMP Alternative

Although neither a subregional NCCP/MSAA/HCP nor a SAMP would be prepared and implemented, this Alternative would be distinguished by the following significant elements:

- About 16,536 acres (72 percent) of RMV lands would be in dedicated open space and about 6,279 acres (27 percent) of RMV lands could potentially be developed (with an additional 361 acres of infrastructure outside the Planning Areas) under this Alternative assuming the B-10M open space/development footprint.
- About 1,395 acres of FTPSA lands would be in open space and about 2,138 acres could be developed under the current County General Plan.
- Landowners would process sequential and incremental applications for project-level Section 7 consultations or HCPs and for SAAs within the RMV property, on other private lands and on public lands (*e.g.*, landfill property) within the planning area over a time period that could range from 15 to 30 years.
- Future development would be subject to incremental project-by-project application of state and federal regulatory program requirements and would be required to minimize and mitigate impacts on threatened and endangered species and on streambed resources at the project level.
- Future regulatory decisions would not be based on the Draft Southern Planning Guidelines and Draft Watershed Planning Principles.
- Open space provided within the RMV property and on other private and public lands in accordance with regulatory requirements would be dedicated incrementally over 15 to 30 years as part of agency actions on each separate project/HCP.
- Open space/protected habitat ultimately provided in the Subregion would include the regional parks, non-profit lands and conservation easements previously set aside and future open space dedicated in increments to offset impacts from future projects, but a subregional Habitat Reserve design would not be in place to provide a subregional planning and implementation framework.

b. Consistency with NCCP/MSAA/HCP Purposes and Goals

1. Ability to Formulate an NCCP Conservation Strategy

As noted above, for illustrative purposes, RMV could permit the County-approved project B-12 on a Planning Area-by-Planning Area basis through a series of HCP's/Section 404 permits. However, there are no assurances that RMV would be successful in gaining all the development approvals for A-4 under a B-12 scenario. Because development approvals and open space dedications are linked, there is a parallel lack of assurance that the open space associated with

the B-12 would be dedicated. Under an A-4 Alternative there are no assurances regarding the amount and location of open space that would be protected and therefore no assurances regarding the possible creation of a habitat reserve. Similarly, under a No Project/No SAMP scenario there are no assurances regarding the level and extent of management activities apart from those outlined in the AMP approved as part of the GPA/ZC (through the Settlement Agreement). As an example of potential habitat management benefits under this Alternative, the recent proposed critical habitat designation for the thread-leaved brodiaea acknowledged severe difficulties with managing and monitoring prior Section 7 consultation conditions for brodiaea translocation which would not be the case under the AMP required as part of the County GPA/ZC action. The protection, restoration and management of riparian resources, along with the mitigation of any impacts on streambed resources subject to CDFG jurisdiction, would be comprehensively addressed in accordance with GPA/ZC habitat protection and management requirements.

2. Incorporation of Committed Open Space

As noted previously, this Alternative would reflect the B-12 open space configuration, as shown in *Figure 133-M*, and thus would provide for extensive linkages in every area identified as significant on the Linkages/Wildlife Corridors map (*Figure 41-M*). In this way, this Alternative would build upon and integrate previously committed regional open space areas.

3. Regulatory Coverage and Provisions

(a) Ability to Support Issuance of Take Permits for Listed Species

With regard to regulatory coverage and provisions for designated species, only listed species would be addressed by this Alternative. Modifications to development areas could be required to address potential thread-leaved brodiaea impacts, although prior Section 7 consultations for this plant species have allowed substantial impacts. Potential connectivity impacts could occur south of San Juan Creek in Planning Area (PA) 4 (East Ortega), but these areas are identified as low intensity and could be designed to accommodate California gnatcatcher and arroyo toad habitat use and movement along San Juan Creek.

(b) Coverage for Unlisted Species

Regulatory coverage and provisions for unlisted species has not been determined. However, the *Chapter 8* does review the extent to which planning species have been addressed.

c. Adaptive Management and Implementation/Funding

An IA would likely be required under FESA Section 10(a)(1)(b) and CESA 2081, along with a mitigation monitoring program pursuant to both of these statutes and to CEQA. Regarding adaptive management, unlike the No Take A-5 Alternative analyzed below, this Alternative could provide funding for long-term habitat management as part of mitigation for impacts on California gnatcatchers. Consistent with U.S. Supreme Court case law and the provisions of CESA 2081, such funding would need to “be roughly proportional in extent to the impact of the authorized taking on the species.”

9.2.2 No Take Alternative (A-5 – see *Figure 121-M*)

The No Take Alternative is depicted in *Figure 121-M*. This Alternative assumes no NCCP/MSAA/HCP because the absence of Take of listed species obviates the need for preparing an HCP and eliminates an important incentive for participating in the NCCP/MSAA/HCP. The alternative is also formulated to achieve no impact to federally regulated waters of the U.S., including wetlands and to state-regulated wetlands and streams in order to obviate the need for preparing a SAMP or the MSAA component of the NCCP/MSAA/HCP. Since this Alternative can be implemented without impacts on the occupied habitat of listed species and without the need for federal permits, there would be no basis for future Section 7 consultations.²

With regard to land use assumptions, development could proceed under the GPA/ZC at lower densities than provided under the County-approved B-12. Under the GPA/ZC, it is assumed that the number of estate lots would range from a minimum of 2,000 lots (assuming that the entire lot is limited to the depicted development area envelope) to approximately 3,000 lots (assuming that a portion of the undevelopable portion of the lot would extend into open space areas – cf. Rancho Santa Lucia in Carmel Valley, Monterey County). Under the GPA/ZC, some intensification could occur in areas where larger roads could be constructed without requiring a USACE 404 permit or impacting listed species habitat.

a. Significant Elements of the A-5 No Take Alternative

- About 14,820 acres (65 percent) of RMV lands would be in some form of open space and about 8,000 acres (35 percent) of RMV lands could potentially be developed under this Alternative.

² A recent 9th Circuit decision has held that the standard for Take under FESA Section 7 is identical to the standard for Take under FESA Section 9, with the consequence that No Take under Section 9 would constitute No Take under Section 7; hence any critical habitat designation requirements deriving from Section 7 of FESA would not be invoked.

- New development would be limited to those portions of the RMV property that are not occupied by state or federally listed species. The FTSPA would not be encompassed by this Alternative unless the landowners within that planning subarea were to agree to total avoidance of any listed species (as well as wetlands and other agency jurisdictional areas reviewed below) located outside areas currently designated as open space on the adopted plan or in previously committed open space areas.
- New development would avoid impacts to wetlands regulated under state and federal laws.
- Non-wetland waters of the U.S. regulated by the USACE under Clean Water Act Section 404 and non-wetland jurisdictional areas regulated by the state under Fish and Game Code Section 1601/1603 would be avoided.
- The ability to avoid temporary impacts to wetlands and impacts to all ephemeral drainages and non-wetland waters regulated by state/federal agencies would need to be confirmed on a site-specific basis as development occurred within RMV properties.
- As noted above, approximately 14,820 acres (65 percent) of RMV lands would be open space, but would not be required under FESA, CESA, USACE 404 or Fish and Game Code 1601/1603 to be committed to a public or non-profit management program due to the absence of impacts on listed species. Other requirements pursuant to CEQA review or the Subdivision Map Act could result in some open space dedications but would not likely be extensive if overall development density were to be low-density, estate types of development. The configuration of open space would be dictated by avoidance requirements applied to habitat actually occupied by listed species rather than reserve design considerations. Thus, this Alternative has not been identified for purposes of feasibility of management, connectivity and other NCCP planning considerations.
- As noted above, approximately 8,000 acres could potentially be developed. Given a generally low density estate plan, in most areas, access to residential and other uses would be provided through the use of the existing Ranch road network with surfacing limited to existing road widths; the potential development areas depicted on the map for this Alternative (*Figure 121-M*) are all serviced by existing RMV Ranch roads.
- Dedicated open space in the subregion would include the regional parks, non-profit lands and conservation easement open space already set aside and future open space dedicated to offset impacts from projects outside of the RMV boundary.

b. Consistency with NCCP/MSAA/HCP Purposes and Goals

1. Ability to Formulate an NCCP Conservation Strategy

Impacts to habitat occupied by species listed at the state and federal levels and to CDFG jurisdictional streambeds would be avoided. Likewise, impacts to USACE jurisdictional areas

would also be avoided. Therefore, no regulatory approvals would be required under CESA Section 2081, and FESA sections 7 and 9 (including no critical habitat consultation under Section 7). In contrast with land dedications that might be required as mitigation for CESA/FESA Incidental Take permits, no dedications of land to a Habitat Reserve would be required because there would be no Take impacts to mitigate.

With no incentive to participate in NCCP planning, there would be no overall Habitat Reserve, much less a comprehensive subregional Conservation Strategy. Some dedications could be required through the local government entitlement process for large lot subdivisions, but, due to the generally low density nature of development (as noted, a few areas could accommodate higher density development without resulting in Take or streambed alterations), the open space dedications would likely be limited in scale. Because any dedicated lands would not likely be amalgamated in large blocks of open space (see *Figure 121-M*), it is unlikely that any governmental entity would accept the open space areas for purposes of public agency management. Instead, most open space areas would probably be included as part of community association managed open space (*e.g.*, Nellie Gale, Shady Canyon, Coto de Caza, many of the San Clemente and San Juan Capistrano open space areas associated with master plan approvals). Without a large-scale Habitat Reserve on RMV lands, it is extremely unlikely that a functional Habitat Reserve would be assembled for the NCCP planning area.

With regard to the habitat connectivity goals of the SRP tenets of reserve design, the A-5 No Take Alternative would provide varying degrees of connectivity, particularly for California gnatcatchers moving through the western portion of the planning area up to Chiquita Canyon and along San Juan Creek and the Upper Cristianitos sub-basin. However, relative to other Alternatives reviewed in this Chapter, the degree of connectivity achieved with the No Take Alternative is less than under the No Project Alternatives or any of the three Habitat Reserve ‘B’ Alternatives.

As reviewed in *Chapter 6*, approximately 29,970 acres of wildlands have been previously committed to open space protection through a variety of actions. In some areas such as Chiquita Canyon, open space areas under a No Take Alternative would complement the areas protected under the Upper Chiquita Canyon Conservation Area. Likewise, a major connectivity linkage to the west of Trampas Canyon would be preserved, linking gnatcatcher populations in Chiquita Canyon with other populations of gnatcatchers south of San Juan Creek in the western portion of the NCCP planning area. However, the extensive land areas allowed for development purposes under this Alternative in the San Mateo Creek Watershed would not provide opportunities for creating large-scale habitat linkages connecting previously preserved open space blocks with each other and with Caspers Wilderness Park and Lucas Canyon. Additionally, connectivity from the Gabino and La Paz canyons with the Donna O’Neill Land Conservancy and from San Juan Creek to lower Cristianitos Creek would be minimal.

3. Regulatory Coverage and Provisions

(a) Ability to Support Issuance of Take Permits for Listed Species

By definition, this Alternative would not require either state or federal Take permits or authorizations. With this in mind, however, it should be noted that the A-5 No Take Alternative would achieve a significant degree of protection for avian listed species, the arroyo toad and other listed species because it would avoid impacts to occupied coastal sage scrub, jurisdictional wetland and riparian areas and certain clay soil areas supporting listed species. In this sense, it would provide considerably greater protection of listed species than that provided by existing developments and master planned communities in other developed portions of the Subregion.

The protection of listed species and associated habitat and state jurisdictional streambeds would be accomplished by avoidance and minimization of impacts, not by active management or an ongoing AMP. By avoiding/minimizing impacts to habitats occupied by state and federally listed species and avoiding/minimizing impacts to wetlands and streambeds, the habitats of listed species would be protected through conservation easements, community association CC&Rs, dedications, etc. required at the local government level to assure responsibility for areas that are not developed.

For the coastal California gnatcatcher, substantial populations of gnatcatchers in other planning areas have persisted despite being entirely surrounded by development, in some cases for 30 to 40 years. In northern Orange County, both West Coyote Hills and East Coyote Hills have maintained sizeable gnatcatcher populations (48 pairs in West Coyote Hills with no management and 22 pairs in East Coyote Hills, an actual increase in populations following an active restoration program). In the County of Orange Central and Coastal Subregion, the habitats of large populations of gnatcatchers were designated as Existing Use Areas in Anaheim, Orange, Irvine and Newport Beach (see Central and Coastal NCCP/HCP Map Book). In southern Orange County sizeable populations of gnatcatchers are found around the periphery of the Coto de Caza development and within Arroyo Trabuco. In 2001 Dudek conducted a study of gnatcatcher persistence in eight urbanized locations in central and southern Orange County - Anaheim Hills Golf Course, Modena/Panorama, Turtle Rock/Strawberry Farms, Back Bay, Salt Creek, Street of the Golden Lantern, Dana Point and Coto de Caza (*Southern Orange County California Gnatcatcher Study: Selected Comparison of 1994 & 2001 Populations*, Dudek 2004). The Dudek study compared 1994 and 2001 gnatcatcher data and concluded consistent persistence of the species in terms of the number of occupied locations. This site-specific study corroborates the overall persistence of the species based on observations in West and East Coyote Hills, Anaheim, Orange, Banning Ranch and Turtle Rock.

For the least Bell's vireo and southwestern willow flycatcher, occupied habitat is avoided and any development would comply with standards comparable to those established in the Section 7 consultation for the Arroyo Trabuco Golf Course and other developments in San Diego County adjacent to vireo/flycatcher habitat. As reviewed in the Section 7 consultation for the California Toxics Rule, neither species has shown any particular water quality sensitivities (the vireo has thrived in riparian areas with severe water quality problems and in habitats supplied with substantial quantities of urban runoff, both dry season and wet season).

Riverside and San Diego fairy shrimp vernal pool habitat is avoided and, given survival to date without management, the absence of management appears to not be a factor with regard to survival; however, recovery actions would likely be impeded by a lack of ongoing habitat management.

Arroyo toad habitat would be avoided under the criteria established in the prior critical habitat designation (*e.g.*, 80-ft contour – 66 Federal Register, 23254, 2/7/01). Given a development scenario of generally low density estate development on only about 35 percent of the RMV property, no drainage subunit or sub-basin would have any significant amount of impervious surface. All non-wetlands waters and Fish and Game Code Section 1600 streambed jurisdictional areas would be avoided, thus minimizing changes in hydrology. The very small amount of impervious surface would not result in significant changes to major episodic stormflow events or sediment transport essential to toad habitat. Additionally, new NPDES requirements established by the San Diego RWQCB require the preparation of stormwater management plans that address all “pollutants of concern” and “conditions of concern” in accordance with applicable regulatory standards. Thus, the low density of development and small amounts of new impervious surface, in conjunction with San Diego RWQCB/County of Orange water quality requirements, would assure protection against water quality impacts. Potential long-term impacts caused by the expansion of invasive plant species would not be addressed. Invasive plants such as giant reed, pampas grass and tamarisk are found in the planning area and are a potentially severe threat to arroyo toad habitat and to other listed aquatic/riparian species in San Juan Creek and downstream of the planning area in the San Mateo Creek Watershed. However, because these conditions presently exist, the presence of invasive plant species would have no causal relationship to any new development (*i.e.*, no “nexus”) and would have to be addressed through public resources and funding in the absence of an approved NCCP/MSAA/HCP.

Habitat for the thread-leaved brodiaea would be avoided, including areas important for its sustainability in its present locations.

Under a low density, estate lot development scenario, it is not likely that many unlisted species would be sufficiently impacted to require specific protection under CEQA within open space

areas. Given the total amount of open space under this Alternative, it could be expected that habitat areas of unlisted species would be protected indirectly as part of community associations' open space, but such habitats would not be actively managed for species benefit purposes.

(b) Coverage for Unlisted Species

Protection provided for other NCCP 'B' Alternatives "planning species" that depend on habitats other than coastal sage scrub, mainstem riparian habitat areas and some clay soils (these habitats are protected by avoidance of gnatcatcher and arroyo toad habitat and areas occupied by thread-leaved brodiaea) would be considerably less than that provided by any of the other programmatic or Habitat Reserve Alternatives reviewed in this Chapter.

c. Adaptive Management and Implementation/Funding

Regarding Habitat Reserve management, it is extremely unlikely that an AMP could be formulated and undertaken on a long-term basis for either listed or other unlisted Covered Species on RMV lands because, with no impacts on listed species and CDFG/USACE jurisdictional areas, there would be no basis for requiring an overall, comprehensive habitat management program. Although some degree of management might be undertaken by community associations or a master community association (*e.g.*, such as the Marblehead Coastal project in San Clemente), such an association or associations would be under no obligation under CESA/FESA, USACE 404 or Fish and Game 1601/1603 to undertake long-term adaptive management of different habitat types. As an example of the consequences of not implementing an AMP, extensive invasive upland and riparian plant species have been documented within the subregional planning area. The inability to plan and carry out a comprehensive invasive species eradication program on a long-term basis would likely have significant long-term species implications (particularly for aquatic species both within and downstream of the planning area affected by giant reed, pampas grass and tamarisk expansion).

With regard to the fourth element of an NCCP Conservation Strategy, the IA (which also addresses funding), there would be no regulatory basis for requiring such an IA or associated funding (as are required under FESA Section 10 and NCCP practice when Take authorization is involved) due to the absence of a regulatory nexus. As a consequence, there would be no funding provided for a long-term AMP (funding would be required for carrying out any CEQA mitigation measures but would not likely extend to long-term adaptive management as formulated pursuant to the SRP Conservation Guidelines).

d. Consistency with the Purposes and Goals of Planning Participants

1. Provide for Land Uses Meeting the Social and Economic Needs of the People of the Subregion and the Overall County

The A-5 No Take Alternative would identify land areas that could be developed consistent with the protection of habitat occupied by listed species. However, the No Take Alternative would not provide a wide range of housing opportunities (there are only a few areas offering opportunities for more dense housing given limitations on new road construction inherent in this Alternative). Given the fact that RMV lands represent the last major undeveloped landholding in southern Orange County, the inability to substantially address the regional housing allocation for this area (about 20,000 dwelling units) and to provide for a wide range of housing opportunities would conflict with societal goals and would likely “have significant adverse economic impacts to the region’s economy” (EA for the gnatcatcher 4(d) Special Rule, p. 44). The inability to identify lands responding to broader societal needs would also be in conflict with the Legislative Findings for the NCCP Act.

2. Identify Land Areas that Would Provide the Economic Basis for Dedications/Acquisition of Lands Necessary for the Creation of an NCCP Reserve System

As reviewed previously, the lack of impacts on listed species would remove a significant regulatory nexus required for dedicating land for habitat management. Likewise, the low density development pattern typical of estate lots (*e.g.*, only one acre of the four acres on each lot would likely be developed under this review scenario) leaves very little CEQA nexus for requiring dedications of land to public agencies for impacts to unlisted species. It is more likely that most undeveloped lands would be owned and managed through community associations or other forms of private open space (*cf.* Shady Canyon, Coto de Caza). It is clear that no funding could be required for managing the habitats of listed species since none would be impacted. Funding is rarely required by local jurisdictions for management for unlisted species habitat and such funding is unlikely to be capable of being justified because the protection of approximately 14,820 acres of open space under this Alternative – due to its very scale - would very likely offset any CEQA impacts on unlisted species.

e. Conclusion Regarding the No Take Alternative

Although the A-5 No Take Alternative may be economically feasible for RMV and potentially for landowners within the FTPSA, it does not meet the Project Purposes reviewed in *Chapter 2*, including both long-term habitat protection/management and County housing needs.

SECTION 9.3 ANALYSIS OF HABITAT RESERVE ALTERNATIVES

As reviewed in *Chapter 6*, three 'B' Habitat Reserve Alternatives, with an associated HRMP, have been selected for review in *Chapters 8* and *9*: B-8, B-10M and B-12. *Appendix P* sets forth detailed analyses of the consistency of each of these 'B' Alternatives with the SRP/Science Advisors Tenets of Reserve Design, the SAMP Tenets and the Baseline Conditions Watershed Planning Principles in relation to the applicable Project Purposes set forth in *Chapter 2*. As indicated previously, the analyses in *Appendix P* rely in part on the *Chapter 8* analyses of the consistency of each of the three 'B' Alternatives with the Draft Southern Planning Guidelines and Draft Watershed Planning Principles. The following analyses present overviews and summaries of the *Appendix P* consistency reviews, along with recommendations as to whether a particular Alternative should be selected for further consideration in *Chapters 13* and *14* or should be removed from further consideration.

9.3.1 Alternative B-8 (see *Figure 129-M*)

a. Overview of Major Landscape and Habitat Reserve Planning Features of the Proposed Habitat Reserve on RMV Property

1. Major Landscape Features

In comparison with the B-10M and B-12 Alternatives, the B-8 Alternative proposes to maximize the open space on RMV lands with the result that County housing needs are addressed to a far lesser extent than the other two Alternatives. Alternative B-8 identifies Chiquita Canyon, Verdugo Canyon and all of the RMV portion of the San Mateo Creek Watershed as open space. All of the habitat linkages and wildlife movement corridors identified in the Draft Southern Planning Guidelines and Draft Watershed Planning Principles would be protected. Except for impacts to California gnatcatchers, many-stemmed dudleya and cactus wrens within the proposed Gobernadora development area, only limited impacts would occur to NCCP/MSAA/HCP planning species. The B-8 Alternative would provide two development locations in areas already substantially altered by past and present resource utilization activities (Gobernadora and Trampas Canyon) and a third smaller development area (Ortega Gateway) adjacent to existing development.

By substantially reducing the size and number of the development areas (relative to the B-10M and B-12 Alternatives), the B-8 correspondingly reduces the regulatory "nexus" basis for Habitat Reserve dedications and thereby significantly increases the open space that would have to be acquired with public funds. Further, the B-8 Alternative would not address County housing goals in a manner comparable to the B-10M and B-12 Alternatives. The B-8 Alternative would likely allow for 8,400 units of housing compared with approximately 14,000 units of housing

under the B-10M and B-12 Alternatives and, given the limited land area available for housing development, would likely not provide for as great a range of housing opportunities as the other two Alternatives. Given the B-8 Alternative's emphasis on maximizing open space with only limited contributions to County housing needs and related objectives, Alternative B-8 is less an attempt to balance resource conservation and housing needs and is, instead, primarily a public open space/habitat acquisition alternative.

2. Significant Reserve Design and Land Use Elements of Alternative B-8

Significant reserve design and land use elements of the B-8 Alternative include the following:

- Provide for designation of approximately 19,120 acres (84 percent) of RMV property as permanent open space.
- The 19,120 acres of RMV lands proposed for open space would result in approximately 47,650 acres (52 percent) of open space within the subregion including regional parks, non-profit lands and conservation easement open space already set aside, but not including 40,000 acres in the CNF.
- Locate potential development on about 3,680 acres (16 percent) of RMV lands.
- A large block of habitat totaling about 12,950 acres of unfragmented habitat would be retained in the southeastern portion of RMV (see *Figure 156-M*).
- Maintain the potential for plant translocation and habitat enhancement and restoration.
- Provide for acquisition and management of open space through dedications, and public and non-profit organization funding of acquisitions and management - a voluntary sale by RMV for purpose of open space acquisition likely would be required for substantial areas; however, the amount of dedication areas versus acquisition areas has not been defined.
-

3. Habitat Reserve Design Features

With regard to the San Juan Creek Watershed, Chiquita Canyon is proposed to be protected in its entirety in order to maximize the protection of occupied gnatcatcher habitat comprising a significant portion of a *major population/key location* and other resources within the Canyon as well as on Chiquadora Ridge. Verdugo Canyon is also proposed to be protected in its entirety in order to maintain sources of coarse sediment for San Juan Creek and to maximize the Canyon's habitat linkage function connecting San Juan Creek to the CNF and to portions of Gabino Canyon. The Ortega Gateway and Trampas Canyon development areas are the only

development locations proposed in areas to the south of San Juan Creek. Alternative B-8 emphasizes preserving all of the planning area lands located within the San Mateo Creek Watershed.

With regard to large blocks of open space, a major block of habitat, totaling 9,390 acres would extend from upper Chiquita Canyon to the Radio Tower Road area south of San Juan Creek and includes all of Chiquita Canyon Ridge and Chiquadora Ridge (*Figure 156-M*). A second major block of open space lands on RMV property, totaling 12,500 acres, would extend from Verdugo Canyon (and all areas south of San Juan Creek within the San Juan Creek Watershed other than Trampas) through all of the portions of the San Mateo Creek Watershed to the boundaries of the San Mateo Wilderness and Camp Pendleton. In combination with already protected open space, a total of 26,260 acres of contiguous habitat connected to CNF and the San Mateo Wilderness would be conserved.

b. Summary of Major Conservation Strategy Issues Raised in the Chapter 8 Sub-Basin Consistency Reviews and this Chapter 9 Landscape-Scale Consistency Review for the B-8 Alternative

1. Consistency with both Landscape Level and Sub-Basin Guidelines/Principles

As described above and shown in *Figure 156-M*, Alternative B-8 would provide substantial protection of large habitat blocks connected by identified habitat linkages. Except for constraints on linkage K south of Trampas Canyon common to all of the 'B' Alternatives, Alternative B-8 achieves consistency with most of the landscape level and sub-basin guidelines except those that involve the funding of the AMP set forth in *Chapter 8*. This level of consistency is achieved primarily through the proposed preservation of 84 percent of RMV lands in conjunction with already protected open space.

2. Economic Feasibility of Assembling the Habitat Reserve Areas on RMV Lands

With regard to the assemblage of Habitat Reserve areas on RMV lands, the B-8 Alternative provides for an open space-to-dedication ratio in excess of 5 to 1. There are two large-scale land areas considered to be generally comparable to RMV lands with regard to resources and involvement in the NCCP program. These areas are the Newport Coast in Orange County (part of the County of Orange Central and Coastal NCCP/HCP) and Otay Ranch in the Chula Vista Subarea Plan area of San Diego County (part of the San Diego City and County MSCP program). Open Space dedications areas under the Newport Coast Local Coastal Program approved under the NCCP/HCP comprise approximately 62 percent of the total private lands. Similarly, open space dedications under the Otay Ranch element of the Chula Vista Subarea Plan

comprise 66 percent of the 17,157 acres of identified vegetation communities. Under the Newport Coast and Otay Ranch plans, the ratio of open space to development ranges from 1.66:1 to 2 to 1. These two areas are under very stringent environmental regulations (the Newport Coast area was subject to the California Coastal Act of 1976 as well as the NCCP and Otay Ranch is subject to the NCCP) and contain lands with very high natural resource values. As another comparable large-scale land program, Aliso Viejo master plan area in Orange County, an element of the Central and Coastal NCCP/HCP provided a 1 to 1 dedication ratio, or 50 percent preservation of open space/habitat areas.

Although the B-12 Alternative provides for 74 percent dedication of lands to the Habitat Reserve (a 3:1 ratio based on the consensus reached with environmental groups pursuant to the Settlement Agreement), the B-12 Alternative would allow for 14,000 housing units to provide the economic basis for the Habitat Reserve dedications in contrast with B-8 Alternative projected to allow for 8,400 units; additionally, the B-8 would likely not provide for as great a range of housing opportunities as the other ‘B’ Alternatives, further reducing the social and economic basis for justifying Habitat Reserve dedications from the perspective of RMV and the County of Orange.

For illustrative purposes, using both a 2:1 and 3:1 dedication ratio, the potential dedication areas in relation to the 3,680 acres of development proposed under the B-8 Alternative would be follows:

- 2:1 Dedication Ratio; Total dedication area = 7,360 acres
- 3:1 Dedication Ratio: Total dedication area = 11,040 acres

Under a 2:1 Dedication Ratio, 11,775 acres (22,815 acres [RMV Planning Area], minus 7,360 dedication acres and minus 3,680 development acres) of RMV lands would not be committed to permanent habitat protection and would need to be acquired through the use of public funds. The lack of available identifiable public funding for land acquisition raises a significant question as to whether the B-8 Alternative would be a “feasible” alternative under CEQA and a “reasonable” alternative under NEPA.

The 3:1 dedication ratio is also calculated above in order to present a hypothetical dedication program consistent with the maximum dedication ratio identified to date (the 3:1 dedication ratio under the B-12 Alternative), even though the 3:1 ratio lacks a reasonable basis under the altered site conditions of much of the B-8 Alternative development areas or the special factors cited by the Permit Applicant under the B-12 Alternative. Using a 3:1 dedication ratio for B-8, 8,095 acres (22,815 acres [RMV Planning Area], minus 11,040 dedication acres [illustrative dedication], and minus 3,680 development acres) of RMV lands would not be committed to permanent habitat protection. If these lands were to be included in the Habitat Reserve, they

would need to be acquired through the use of public funds, thus heightening the question of whether the B-8 Alternative would be practicable.

The open space areas under the B-8 Alternative, at over a 5 to 1 ratio, are clearly well in excess of any land area comparable in habitat value to the RMV lands and, therefore, dedication of the entire proposed open space would not meet a “rough proportionality” test. Further, as noted above, two of the development areas, Planning Area 1 (Ortega Gateway) and Planning Area 5 (Trampas Canyon), have considerably fewer resource values than any of the other portions of the RMV lands (these two planning areas are shown as developed under all of the ‘B’ Alternatives) and thus would not support a “nexus” test warranting a significant offsetting open space dedication area in excess of the 2:1 ratio reflected in the Newport Coast and Otay Mesa comparisons. Consequently, the B-8 Alternative dedication ratio of 5:1, with far less development to support such an extraordinary level of dedication and fewer impacts justifying such a high dedication ratio, would necessitate a substantial level of public acquisition in order to assemble the Habitat Reserve.

Thus, there are substantial issues regarding the adequacy of funding that would be required to assemble Habitat Reserve land areas identified under the B-8 Alternative and to provide funding for implementation of the AMP (see following discussion). While the B-8 Alternative addresses Habitat Reserve design/connectivity planning considerations, the feasibility of acquiring significant portions of the land areas required to implement the B-8 Alternative Habitat Reserve design has not been demonstrated. To the extent that the economic return from proposed development under this Alternative would be insufficient to ensure landowner participation in a public acquisition program (even if the substantial funds required to assure the success of public acquisition were secured, RMV has stated that it would not be a willing seller in light of the limited development allowed under the B-8), this Alternative would not be feasible. In addition to the issue of voluntary participation in an acquisition by RMV, this Alternative may not be economically feasible without other sources of substantial funding for the acquisition of development rights and for funding the implementation of the AMP. Therefore, the overall feasibility of providing the economic basis for the assemblage of the Habitat Reserve and the funding of the AMP is highly questionable.

The Habitat Reserve Alternatives are to be subject to a joint CEQA/NEPA review in the EIR/EIS for the NCCP/MSAA/HCP. Because CEQA requires the lead agencies to identify “feasible alternatives” which are “capable of” avoiding or substantially lessening any significant effects of the project (emphasis added) and because NEPA requires alternatives to be “reasonable” (which has been interpreted to mean feasible), the B-8 Alternative does not appear to be meet the test of constituting a feasible alternative.

3. Long-term Habitat Management

In that the B-8 Alternative would allow significantly less development than the B-10M and B-12 Alternatives, the AMP for the B-8 Alternative would probably not be as extensive from a monitoring perspective. However, many of the long-term adaptive management considerations involve invasive species control and habitat restoration areas, and such considerations exist independently of the level of development allowed under particular ‘B’ Alternatives. Thus, while some long-term monitoring costs would likely be less than under the other Habitat Reserve Alternatives, other costs related to long-term monitoring and invasive species control (*e.g.*, monitoring for invasive plant and animal species) would likely be as high, or even higher, than for the other ‘B’ Alternatives due to the larger area of the proposed Habitat Reserve requiring oversight. Restoration and management actions (particularly invasive species control) would remain the same as under the other Alternatives, with potentially higher costs for the control of invasive plant species (reflective of the larger Habitat Reserve area that would need to be managed).

Regarding long-term habitat management, Alternative B-8 proposes to provide for all of the AMP recommended habitat restoration areas within the B-8 open space. Opportunities for providing recovery actions for the arroyo toad, least Bell’s vireo and the California gnatcatcher in the San Juan Creek Watershed would be provided through habitat restoration and invasive species control while actions to address existing areas of erosion in clay soils within the San Mateo Creek Watershed would benefit the arroyo toad. With considerably fewer residential units and opportunities for other types of development, the B-8 Alternative has a significantly reduced adaptive management funding capability as compared with the other Habitat Reserve Alternatives. As a consequence, it is likely that the B-8 Alternative would not be able to assure the funding of several significant aspects of long-term monitoring, restoration and adaptive management.

The importance of the potential inability to implement an effective AMP within the Subregion is underscored by the comments provided by Drs. Noon and Murphy in their written comments to the County. Noon and Murphy declared that:

. . . common threats in southern California such as wildfire, invasive species, and extreme weather events have emphasized that reserve management may be even more important to the success of conservation than reserve extent. Coping with environmental change, both natural and human-caused, is the single greatest challenge facing conservation planners in the new millennium – one that we believe can be met only by using adaptive management. (p 1. October 2004 letter)

Thus, the ability to implement adaptive measures may be as important to long-term conservation of species and habitat as the size of the Habitat Reserve.

c. Conclusions Regarding Consistency with Subregional Conservation Goals and Objectives

Based on the foregoing analyses, it does not appear that the B-8 Alternative can feasibly carry out three of the four elements of a Conservation Strategy: (1) assembly of a Habitat Reserve; (2) implementation of a long-term AMP as part of the overall HRMP; and (3) the provision of funding and assemblage of the proposed Habitat Reserve through an IA. For the reasons stated in this section, it is recommended that Alternative B-8 be removed from further consideration as a Habitat Reserve and Habitat Management Alternative for potential inclusion in the final NCCP/MSAA/HCP Conservation Strategy.

9.3.2 Alternative B-10M (see *Figure 131-M*)

a. Overview of Major Landscape and Habitat Reserve Planning Features of the Proposed Habitat Reserve on RMV Property

1. Major Landscape Features

Alternative B-10M was formulated by the County of Orange during the GPA/ZC process in significant part to provide a non-acquisition alternative to the B-9 Alternative (discussed in *Chapter 6*) that addresses housing needs and other related County objectives, while being responsive to the sub-basin recommendations contained in the Draft Southern Planning Guidelines and Draft Watershed Planning Principles, particularly for the Chiquita, Cristianitos and Gabino sub-basins. In formulating the B-10M Alternative, the County used the same basic approach as the B-9 Alternative, but attempted to provide for more balanced development/protection that would allow the B-10M open space to be assembled solely through development dedications. This approach would address the uncertainties in the B-9 Alternative regarding concerns with relying on public acquisition for a significant portion of the proposed Habitat Reserve on RMV lands, including the availability of public or non-profit funds and the need to reach agreement on an acquisition with RMV.

The following are significant landscape features of the B-10M Alternative:

- Within the San Juan Creek Watershed:
 - Protection of Chiquita Creek for its entire length and the entirety of Chiquita Ridge west of the creek;

- Protection of substantial contiguous habitat located south of San Juan Creek that would provide connectivity between the western portion of the planning area and Chiquita Canyon and San Juan Creek;
 - Protection of the Gobernadora Creek floodplain from San Juan Creek north to the point where it exits the Coto de Caza planned community;
 - Provision of extensive habitat connectivity from Upper and Middle Chiquita Canyon across Sulphur Canyon/Chiquadora Ridge through the Gobernadora Creek floodplain, across Upper Gobernadora through a 2,000 to 2,500 feet wide wildlife movement corridor to the Caspers Wilderness Park portion of the proposed Habitat Reserve;
 - Protection of the mesa area west of Trampas Canyon and south of San Juan Creek (*i.e.*, the Radio Tower Road area) supporting vernal pool and grasslands species, including Riverside and San Diego fairy shrimp, while also serving as a major north-south connectivity corridor;
 - Protection of all of the San Juan Creek 100-year floodplain within the RMV property; and
 - Protection of all of the mainstem creek and associated drainage within Verdugo Canyon.
- Within the San Mateo Creek Watershed:
 - Protection of all of the Gabino Canyon sub-basin, with the exception of ten 2-acre estate lot in upper Gabino Canyon west of the creek and the development area proposed within the Blind Canyon subunit;
 - Protection of all of the La Paz Canyon sub-basin on RMV property;
 - Protection of most of the Cristianitos Creek sub-basin, with limited development in upper Cristianitos, including a golf course; and
 - Protection of the lower Cristianitos Creek floodplain and the Talega Creek floodplain to the RMV property line.

A major feature of the B-10M Alternative is the use of a Planning Reserve designation in three significant areas on RMV lands, as shown in *Figure 157-M*. The following is the description of the Planning Reserve designation taken from the Ranch Plan GPA/ZC EIR:

The Planning Reserve designation covers certain areas containing sensitive natural resources that would not be proposed for development until later phases of the project and/or until specified pre-conditions to development have been satisfied. Three distinct Planning Reserve areas have been identified for the B-10M Alternative: (1) Planning

Reserve A – the northern portion of Planning Area 2 (Chiquita); (2) Planning Reserve B – the entirety of Planning Areas 6 and 7 (Cristianitos); and Planning Reserve C – Planning Area 8.

. . . . The precise footprint of development within each Planning Reserve would be identified as part of the more detailed planning efforts to be carried out in the future and would consider the guidelines and principles applicable to those areas.

[for purposes of the analysis of the land uses allowable under the B-10M with the draft Southern NCCP Guidelines and Watershed Planning Principles, the NCCP/MSAA/HCP uses the same maximum development acreage, density/intensity of development and development bubble locations employed in the Ranch Plan GPA EIR]

(Ranch Plan GPA/ZC draft EIR, p. 5-72)

The primary differences between B-10M and the B-8 and B-12 Habitat Reserve designs are development that would be allowed in two of the areas identified as Planning Reserve:

- Middle Chiquita – includes limited development and a golf course above the treatment plant;
- Upper Cristianitos/PA 6 – Two small development areas (totaling 61 acres) are provided west of the creek; and
- Upper Cristianitos/PA 7 – A golf course is located in PA 7 on the east side of upper Cristianitos Creek. Additionally, approximately 250 acres of development are provided for under a low density approach in PA7.

2. Significant Reserve Design and Land Use Elements of the B-10M Alternative

The following are significant land use elements of the B-10M Alternative on RMV lands:

- 15,132 acres (66 percent) of RMV land would be committed open space/Habitat Reserve through a series of phased dedications of conservation easements (see *Figure 131-M*)
- The proposed designation of 15,132 acres of RMV land as protected open space would be a central element of the overall open space system that would total about 43,660 acres, comprising 48 percent of lands within the subregion, but not including 40,000 acres of CNF.
- Proposed development areas total 7,683 acres which includes all golf course acreages.

- In order to improve habitat functions in extensive areas south of San Juan Creek and to provide access to proposed development areas, this Alternative proposes a shift in the function of portions of Ortega Highway from a major highway to a local road in conjunction with the proposed construction of a new arterial road and a crossover of San Juan Creek to connect the PA 4 (East Ortega) development area with proposed development areas north of San Juan Creek.

3. Reserve Design Features

The B-10M Alternative open space would create four large blocks of habitat that are both connected with one another and with other large scale protected habitat areas (see *Figure 158-M*):

- The eastern and northern portions of the proposed open space connect with other previously protected open space areas to comprise a large contiguous habitat block containing 21,870 acres encompassing portions of both the San Mateo Creek and San Juan Creek Watersheds and extending westward to include that portion of the San Juan Creek corridor located between the East Ortega and Trampas development areas;
- A 3,230-acre block of habitat within the Chiquita sub-basin extending from the Upper Chiquita Canyon Conservation Area in the northern portion of the sub-basin to San Juan Creek and connecting with the Riley Wilderness Park, through Sulphur Canyon to Gobernadora Creek and to Caspers Wilderness Park via an open space corridor at the northern edge of the proposed Gobernadora/Central San Juan development area;
- A 4,250-acre block of habitat starting at San Juan Creek and extending through the Radio Tower Road area to the immediate west of the PA 5 Trampas development area; and
- A 1,900-acre block of habitat in Arroyo Trabuco, connecting with the Chiquita Canyon habitat block through Habitat Linkage B and extending to the FTSPA to the north and to the CNF to the east.

b. Summary of Major Conservation Strategy Issues Raised in the Chapter 8 Sub-Basin Consistency Reviews and this Chapter 9 Landscape-Scale Consistency Review for the B-10M Alternative

1. Consistency with both Landscape Level and Sub-Basin Guidelines/Principles

As shown in *Figure 158-M*, the B-10M Alternative would provide substantial protection of large habitat blocks and identified habitat linkages. On an overall basis, the B-10M Alternative

Habitat Reserve meets landscape-scale NCCP and SAMP guidelines and principles, with the possible exception of the potential fragmentation caused by the two small development areas in PA 6 (Cristianitos Meadows) and the combined golf course/estate development in PA 7 (Cristianitos Canyon). Further, the B-10M Alternative provides for high levels of consistency with the Guidelines and Principles reviewed in *Chapter 8* (for instance, development proposed in PA 7 would not only stabilize existing erosion areas but would also eliminate sources of fine sediments by locating development in areas with clay soils, a major source of fine sediments detrimental to aquatic habitat conditions). Overall, major Guidelines/Principles consistency is achieved with respect to the protection of planning species, major vegetation communities, habitat blocks, connectivity, species diversity, significant hydrologic and geomorphic processes and water quality.

2. Economic Feasibility of Assembling the Habitat Reserve Areas on RMV Lands

The B-10M Alternative provides for assembling Habitat Reserve areas on RMV lands without any need for public or non-profit acquisition funding.

Open space proposed as a part of this Alternative in conjunction with previously committed open space areas located within the Southern NCCP/HCP planning area would substantially meet the provisions of the landscape-level reserve design tenets, SAMP tenets and Baseline Conditions Watershed Planning Principles, as well as sub-basin and watershed-scale guidelines and principles, for the design of a subregional Habitat Reserve. With regard to the HRMP, the B-10M Alternative allows for development areas that would provide the economic basis for full funding of the overall management program set forth in *Chapter 8*.

3. Long-Term Habitat Management

Regarding the overall HRMP, including adaptive management, Alternative B-10M generally is consistent with and helps carry out the comprehensive Invasive Species Control Plan (*Appendix J*). Alternative B-10M protects the coastal sage scrub restoration areas in Chiquita Canyon. Within the Gobernadora sub-basin, Sulphur Canyon and associated coastal sage scrub restoration areas are protected. Importantly, Alternative B-10M is consistent with the restoration proposed for Gobernadora Creek as reviewed in the AMP. Native grasslands restoration and enhancement areas proposed in the Draft Southern Planning Guidelines for Narrow Canyon within the Chiquita sub-basin and Upper Cristianitos Canyon are protected. However, native grasslands restoration areas proposed for Blind Canyon Mesa would likely be largely precluded by development. The B-10M Habitat Reserve design is consistent with the coastal sage scrub/valley needlegrass grasslands (CSS/VGL) restoration/enhancement areas identified in Upper Gabino Canyon (see *Appendix H*). Alternative B-10M is consistent with the draft Grazing Management

Plan (*Appendix G*) and Wildland Fire Management Plan (*Appendix N*). As reviewed previously, the B-10M Alternative provides the opportunity for important soils stabilization actions in Cristianitos Canyon and funding for major soils stabilization in Upper Gabino. Finally, funding provided through the AMP is sufficient to assist with selected adaptive management actions within County parklands as reviewed in *Chapter 7*.

c. Conclusions Regarding Consistency with Subregional Conservation Planning Goals and Objectives

The Alternative B-10M proposed Habitat Reserve design and HRMP generally meet the Draft Southern Planning Guidelines and Draft Watershed Planning Principles as applied at both the sub-basin and landscape scale. Overall, the B-10M:

- protects the Chiquita Canyon portion of the Chiquita sub-basin;
- provides for major restoration within the Gobernadora sub-basin;
- supports a very substantial portion of a *major population/key location* and other *important populations/key locations* of the coastal California gnatcatcher consistent with the Draft Southern Planning Guidelines in areas considered to be vital to sustaining gnatcatcher populations within the sub-region and to further recovery;
- protects the *key locations* of the thread-leaved brodiaea;
- provides for very limited development within the San Mateo Creek Watershed, thereby creating a large block of Habitat Reserve on the eastern boundary of the study area that connects with Caspers Wilderness Park, the San Mateo Wilderness, the CNF and Camp Pendleton;
- provides funding for and carries out the major elements of the *Chapter 4* management and restoration recommendations and the *Chapter 7* HRMP; and
- places particular emphasis on protecting habitat linkages I in Gobernadora and M in upper Gabino/Verdugo Canyon.

The B-10M Alternative is generally consistent with Subregional conservation planning goals and objectives. Taken together, the open space would protect very large blocks of habitat containing sensitive species and providing connectivity with large-scale protected habitat areas in close proximity to these lands.

While the B-10M is largely consistent with the NCCP/MSAA/HCP guidelines and principles at both the sub-basin and landscape scale, the Wildlife Agencies expressed concerns regarding the configuration of the Habitat Reserve under the B-10M Alternative in three areas:

- **Middle Chiquita:** a configuration that consolidated development around and below the treatment plant would increase habitat block size, improve connectivity and result in an improved habitat reserve design.
- **Cristianitos sub-basin:** a configuration that reduced development would increase habitat block size, improve connectivity and result in an improved habitat reserve design.
- **Talega sub-basin:** a configuration that reduced development would increase habitat block size, improve connectivity and result in an improved habitat reserve design.

To respond to these concerns and discussions with other interested groups and individuals another alternative, Alternative B-12, was developed which provides for greater habitat connectivity than the B-10M Alternative in the three areas described above by limiting development in the areas as further described below. Because on an overall basis, while the B-10M does provide sufficient development to meet the goals of the planning participants regarding the provision of needed housing and but does not, on an overall basis, provide sufficient open space to meet the goals of the participants regarding habitat and species protection when compared to the B-12 Alternative, the B-10M is rejected in favor of Alternative B-12.

9.3.3 Alternative B-12 (see *Figure 133-M*)

a. Overview of Major Landscape and Habitat Reserve Planning Features of the Proposed Habitat Reserve on RMV Property

1. Major Landscape Features

Alternative B-12 is one of the four Alternatives that were prepared after completion of the Draft Southern Planning Guidelines and Draft Watershed Planning Principles. B-12 is designed to address the sub-basin level guidelines and principles. The B-12 Alternative focuses heavily on protecting resources associated with the Chiquita sub-basin and the San Mateo Creek Watershed:

- The proposed B-12 open space would protect habitat and species in the Chiquita sub-basin above the treatment plant and west of Chiquita Creek (see *Figure 159-M*). The Chiquita Canyon portion of the Chiquita sub-basin supports a majority of a *major population/key location* of the coastal California gnatcatcher considered to be vital to sustaining gnatcatcher populations within the sub-region and to further recovery.

- A large block of habitat and associated species in the San Mateo Creek Watershed in the Cristianitos, La Paz and Gabino sub-basins would be protected under this Alternative.

The following areas would be preserved under the B-12 Alternative:

- Within the San Juan Creek Watershed:
 - Chiquita Creek for its entire length, the entirety of Chiquita Ridge west of the creek and the majority of adjacent uplands from the SMWD wastewater treatment facility to the “Narrows;
 - Substantial contiguous habitat located south of San Juan Creek that would provide connectivity between the western portion of the planning area and Chiquita Canyon and San Juan Creek;
 - The Gobernadora Creek floodplain from San Juan Creek north to the point where it exits the Coto de Caza planned community;
 - Extensive habitat connectivity from Upper and Middle Chiquita Canyon across Sulphur Canyon/Chiquadora Ridge through the Gobernadora Creek floodplain, across Upper Gobernadora through a 2,000 to 2,500 feet wide wildlife movement corridor to the Caspers Wilderness Park portion of the proposed Habitat Reserve;
 - The mesa area west of Trampas Canyon and south of San Juan Creek (*i.e.*, the Radio Tower Road area);
 - All of the San Juan Creek 100-year floodplain within the RMV property; and
 - All of the mainstem creek and associated drainage within Verdugo Canyon.
- Within the San Juan Creek Watershed:
 - All of the Gabino Canyon sub-basin, with the exception of the Blind Canyon sub-unit;
 - All of the La Paz Canyon sub-basin on RMV property;
 - All of the Cristianitos Creek sub-basin except for 50 acres of new orchards and 25 acres for the relocation of the Ranch headquarters; and
 - The lower Cristianitos Creek floodplain to the RMV property line.

2. Significant Reserve Design and Land Use Elements of the B-12 Alternative

The following are significant reserve design and land use elements of the B-12 Alternative:

- 16,536 acres of RMV land (73 percent) would be committed to the Habitat Reserve through phased dedications. All of the San Mateo Creek Watershed on RMV lands would be protected, except a 500-acre development area in PA 8 on Blind Canyon mesa and in proximity to the existing Northrop Grumman area, 50 acres of new orchard to be located within PAs 6 and/or 7, and 25 acres for the relocated Ranch headquarters in PA 7.
- The 16,536 acres of RMV lands proposed for open space would result in approximately 45,065 acres (49 percent) of open space within the subregion including County parklands, non-profit lands and conservation easement open space already set aside, but not including 40,000 acres in the CNF.
- Proposed development areas total 6,279 acres (27 percent, including orchards and the 175-acre PA 4 reservoir) of RMV as follows:
 - The area on both sides of Ortega Highway immediately east of the existing residential uses in the City of San Juan Capistrano (PA 1);
 - In Chiquita Canyon (PA 2) immediately adjacent to Tesoro High School in middle Chiquita Canyon and in lower Chiquita Canyon south of the SMWD waste treatment plant and immediately north of the SMWD facility;
 - In the Gobernadora area north of San Juan Creek (PA 3);
 - In Trampas Canyon (PA 5);
 - Orchards and a relocated Ranch Headquarters in the Cristianitos sub-basin (PAs 6 and/or 7); and
 - In Talega and Lower Gabino in the vicinity of the existing Northrop Grumman facilities (PA 8).
- Create a single, large habitat block of about 23,210 acres that connects previously protected open space in Caspers Wilderness Park and Starr Ranch with RMV open space in Verdugo Canyon and the RMV and Donna O'Neill Conservancy.

- Create two additional substantial blocks of connected habitat, including about 7,300 acres encompassing the Radio Tower Road mesa area south of the creek, Chiquita Ridge north of San Juan Creek, middle Chiquita Canyon, the Upper Chiquita Conservancy, Thomas F. Riley Wilderness Park, Sulphur Canyon, a portion of Chiquadora Ridge and lands on both sides of Gobernadora Creek; and an 1,900-acre block encompassing Arroyo Trabuco and extending north to the CNF.
- Assemble designated open space through phased dedications.
- In order to improve habitat functions in extensive areas south of San Juan Creek and to provide access to proposed development areas, this Alternative proposes to potentially reduce existing traffic on Ortega Highway by diverting significant trips north of San Juan Creek through the construction of a new arterial and crossover of San Juan Creek connecting PAs 3 and 4.

Alternative B-12 is designed to address the sub-basin-level guidelines and principles, in addition to the watershed scale SAMP Tenets. This alternative is based on input from the USACE, CDFG, USFWS, and the environmental community and is designed to concentrate new development in San Juan Creek Watershed areas with lower resource values while continuing to protect high resource value areas.

Due to the longer term timeframe for development planning in PAs 4 and 8, it is not possible at this time to identify precise location and configuration of new development within each PA would be impacted by the maximum amount of new allowed development. The amount of future development acreage actually allowed under the B-12 Alternative in PAs 4, 6 and 7 and 8 is considerably smaller than the size of the respective “impact areas” represented by the planning areas. To allow for the flexibility of siting and configuring new development areas within these PAs, the impact/consistency analyses in this Chapter and in *Chapter 8* intentionally overstate the potential impact of future development by assuming that the entirety of PAs 4, 6, 7 and 8 are developed in order to allow for a current review of any impacts that could result from ultimate development. The total “impact areas” under the B-12 analysis, including the overstated impacts within these four Planning Areas would be 7,788 acres; however, actual development impacts would be significantly less. For instance, under the B-12 Alternative, only 550 acres of development and 175 acres of reservoir would be permitted within the 1,127-acre PA 4 and only 500 acres of development would be permitted in the 1,349-acre PA 8. Similarly, only a total of 50 acres of new orchards would be permitted in the combined 431 acres in PAs 6 and/or 7. Thus, while the impact/consistency analyses for all PAs under the B-12 Alternative would address a total 7,788 acres, only 6,279 acres of new development would actually occur. See also *Chapter 8* and *Chapter 13* for discussions of the “overstated” impact analysis.

3. Reserve Design Features

Under the B-12 Alternative, the proposed Habitat Reserve on RMV lands, when combined with other large-scale open space areas proposed for inclusion in the Habitat Reserve, would create three large blocks of habitat (see *Figure 159-M*) that are both connected with one another and with three other large-scale protected habitat areas:

- The eastern and northern portions of the proposed Habitat Reserve connect with other previously protected open space areas to comprise a large, contiguous habitat block containing approximately 23,210 acres – this habitat block extends westward to include that portion of the San Juan Creek corridor located between the East Ortega and Trampas development areas;
- An 7,300-acre block to the west, extending from the Upper Chiquita Canyon Conservation Area in the northern portion of the Chiquita Canyon sub-basin to San Juan Creek and connecting with adjacent portions of Chiquadora Ridge, the Riley Wilderness Park, Gobernadora Creek and to Caspers Wilderness Park via an open space corridor at the northern edge of the proposed Gobernadora/Central San Juan development area; and
- A 1,900-acre block of habitat in Arroyo Trabuco, connecting with the Chiquita Canyon habitat block through Habitat Linkage B and extending to the Foothill-Trabuco Specific Plan area to the north and to the CNF to the east.

b. Summary of Major Conservation Strategy Issues Raised in the Chapter 8 Sub-Basin Consistency Reviews and this Chapter 9 Landscape-Scale Consistency Reviews for the B-12 Alternative

1. Consistency with both Landscape Level and Sub-basin Guidelines/Principles

On an overall basis, the B-12 Alternative Habitat Reserve design meets landscape-scale planning guidelines and planning principles set forth in *Chapters 4* and *5*, as well as providing high levels of consistency with the guidelines and principles reviewed in *Chapter 8*. Major guidelines/principles consistency is achieved with respect to the protection of planning species, major vegetation communities, habitat blocks, connectivity, species diversity, significant hydrologic and geomorphic processes and water quality.

2. Economic Feasibility of Assembling the Habitat Reserve Areas on RMV Lands

The B-12 Alternative provides for assembling Habitat Reserve areas on RMV lands without any need for public or non-profit acquisition funding and is therefore economically feasible.

3. Long-Term Habitat Management

Regarding adaptive management, Alternative B-12 generally is consistent and helps carry out the comprehensive Invasive Species Control Plan (*Appendix J*). Alternative B-12 protects the coastal sage scrub restoration areas in Chiquita Canyon. Within the Gobernadora sub-basin, Sulphur Canyon and associated coastal sage scrub restoration areas are protected. Importantly, Alternative B-12 is consistent with the restoration proposed for Gobernadora Creek as reviewed in *Chapter 7*. Native grasslands restoration and enhancement areas proposed in the Draft Southern Planning Guidelines for Narrow Canyon within the Chiquita sub-basin and Upper Cristianitos Canyon are protected. However, native grasslands restoration areas proposed for Blind Canyon Mesa may be precluded by development, depending on the final siting of the development footprint. The CSS/VGL restoration/enhancement areas in Upper Gabino Canyon would be consistent with the B-12. Alternative B-12 is consistent with the draft Grazing Management and Wildland Fire Management plans (see *Appendices G* and *N*, respectively).

The B-12 Alternative provides the opportunity for important soils stabilization actions in Cristianitos Canyon and Upper Gabino. Both areas contain substantial land areas manifesting ongoing erosion in areas characterized by clay soils—erosion resulting from past clay mining actions in the case of Cristianitos Canyon and erosion resulting from cattle operations and local roads (some of which serve development located outside the planning area) in the case of Upper Gabino. However, given the cost of landform restoration, particularly in Upper Gabino, and the absence of development in Upper Gabino to support land restoration costs as part of development, it is not clear whether major restoration could be undertaken (a lower cost approach to erosion control is set forth in the *Chapter 7*).

c. Conclusions Regarding Consistency with Subregional Conservation Planning Goals and Objectives

The Alternative B-12 proposed Habitat Reserve design and HRMP generally meet the Draft Southern Planning Guidelines and Draft Watershed Planning Principles as applied at both the sub-basin and landscape scale. Overall, and as more extensively reviewed in subsection a. 1 above, the B-12:

- protects the majority of the Chiquita Canyon sub-basin and Chiquadora Ridge;
- provides for major restoration within the Gobernadora sub-basin;
- supports a very substantial portion of a *major population/key location* and other *important populations/key locations* of the coastal California gnatcatcher consistent with the Draft Southern Planning Guidelines in areas considered to be vital to sustaining gnatcatcher populations within the sub-region and to further recovery;
- protects the *key locations* of the thread-leaved brodiaea;
- provides for very limited development within the San Mateo Creek Watershed, thereby creating a large block of Habitat Reserve on the eastern boundary of the study area that connects with Casper's Wilderness Park, the San Mateo Wilderness, the CNF and Camp Pendleton;
- Generally, carries out the major elements of the *Chapter 4* management and restoration recommendations and the *Chapter 7* HRMP both with respect to major vegetation communities and in furtherance of the recovery of state and federally-listed species; and
- Provides major connectivity features through the protection of habitat linkages identified in Chapter 3, including a minimum 1,300 foot wide linkage along San Juan Creek.

SECTION 9.4 SUMMARY OF HABITAT RESERVE ALTERNATIVES SELECTION

The B-12 Alternative and the B-10M Alternative both embody Habitat Reserve designs and HRMPs that achieve a high degree of consistency with the Draft Southern Planning Guidelines and Draft Watershed Planning Principles set forth in *Chapters 4* and *5* and analyzed in *Chapter 8* and in this *Chapter 9*. One other Alternative, the B-8, achieves a higher degree of consistency with the protection recommendations of the guidelines and principles; however, the B-8 Alternative requires a level of acquisition of private lands and such limited development that the feasibility of implementing the B-8 is so unlikely that it is not a feasible/reasonable Alternative. The B-12 Alternative provides for greater habitat connectivity than the B-10M Alternative in three areas – middle Chiquita, the Cristianitos and the Talega sub-basins given the limitations on development within these latter sub-basins. On an overall basis, the B-12 Alternative: **(1)** achieves a high degree of consistency with the Draft Southern Planning Guidelines and Draft Watershed Planning Principles; **(2)** achieves a better balance between sufficient development to meet the goals of the participants regarding the provision of needed housing and habitat protection; and **(3)** provides for the permanent commitment of sufficient open space to meet the goals of the participants regarding habitat and species protection on lands presently owned by the Participating Landowners without any need for acquisition funding. For these reasons and the

other factors reviewed above in this Chapter, Alternative B-12 is selected for further consideration in *Chapters 10, 13 and 14*.

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